

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Previously Presented): A treatment process of a solution containing an organic compound having a fluorocarbon chain, hereinafter the fluorine compound, the process comprising:

adding divalent and trivalent metal salts to said solution,

forming a layered double hydroxide having the fluorine compound between layers to absorb and fix the fluorine compound.

Claim 2 (Previously Presented): A treatment process of a solution containing an organic compound having a fluorocarbon chain, hereinafter the fluorine compound, the process comprising:

adding divalent and trivalent metal salts to said solution,

precipitating a layered double hydroxide having the fluorine compound between layers,

separating a solid part by solid-liquid separation,

dissolving said separated solid part in an acid, and

separating the fluorine compound or its salt.

Claim 3 (Previously Presented): The treatment process of the solution containing the fluorine compound according to claim 1, the process further comprising,

adjusting pH of the solution to more than 4,

precipitating the layered double hydroxide having the fluorine compound between layers.

Claim 4 (Previously Presented): The treatment process of the solution containing the fluorine compound according to claim 1, the process further comprising,
adding an alkali to the solution to adjust pH from 4 to 12,
adding divalent and trivalent metal salts to said solution precipitating the layered double hydroxide having the fluorine compound between layers.

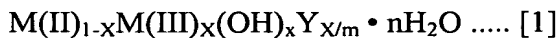
Claim 5 (Previously Presented): The treatment process of the solution containing the fluorine compound according to claim 1,
wherein the divalent metal salt is a salt of magnesium, calcium, zinc, nickel, copper, manganese (divalent), or cobalt (divalent), and the trivalent metal salt is a salt of aluminum, iron, chromium, manganese (trivalent), cobalt (trivalent), potassium, lanthanum, or scandium.

Claim 6 (Previously Presented): The treatment process of the solution containing the fluorine compound according to claim 1,
wherein the divalent and the trivalent metal salts are chlorides.

Claim 7 (Previously Presented): The treatment process of the solution containing the fluorine compound according to claim 1,
wherein the fluorine compound is a carboxylic acid or a sulfonic acid having a fluorocarbon chain, in which the number of carbon is more than 5.

Claim 8 (Previously Presented): The treatment process of the solution containing the fluorine compound according to claim 1,

wherein the layered double hydroxide having the fluorine compound between layers is shown in the following formula [1]:



where, Y is an anion having valence number m of the fluorine compound having the fluorocarbon chain, M(II) is a divalent metal ion, M(III) is a trivalent metal ion, X is 0.1 to 0.5, and n is 0 or positive integer.

Claim 9 (Previously Presented): A treatment process for recovering an organic compound having a fluorocarbon chain, hereinafter the fluorine compound, and its salts, the process comprising,

precipitating the layered double hydroxide by the treatment process according to claim 1,

recovering the solid part by solid-liquid separation,

dissolving said recovered solid part in a mineral acid to recover the separated fluorine compound or its salts, or

heating said mineral acid dissolving the recovered solid part,

putting quietly to separate an oil layer, and

taking out the oil layer to recover the fluorine compound and its salts.

Claim 10 (Previously Presented): A treatment process for recovering an organic compound having a fluorocarbon chain, hereinafter the fluorine compound, and its salts, the process comprising,

precipitating the layered double hydroxide by the treatment process according to claim 1,

recovering the solid part by solid-liquid separation,

dispersing the recovered solid part to an organic solvent, and
filtering an insoluble part from said solvent.

Claim 11 (Canceled).

Claim 12 (Previously Presented): The treatment process of the solution containing the fluorine compound according to claim 2, the process further comprising,
adjusting pH of the solution to more than 4,
precipitating the layered double hydroxide having the fluorine compound between layers.

Claim 13 (Previously Presented): The treatment process of the solution containing the fluorine compound according to claim 2, the process further comprising,
adding an alkali to the solution to adjust pH from 4 to 12,
adding divalent and trivalent metal salts to said solution precipitating the layered double hydroxide having the fluorine compound between layers.

Claim 14 (Previously Presented): The treatment process of the solution containing the fluorine compound according to claim 2,
wherein the divalent metal salt is a salt of magnesium, calcium, zinc, nickel, copper, manganese (divalent), or cobalt (divalent), and the trivalent metal salt is a salt of aluminum, iron, chromium, manganese (trivalent), cobalt (trivalent), potassium, lanthanum, or scandium.

Claim 15 (Previously Presented): The treatment process of the solution containing the fluorine compound according to claim 2,

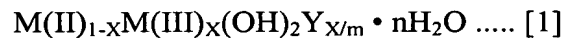
wherein the divalent and the trivalent metal salts are chlorides.

Claim 16 (Previously Presented): The treatment process of the solution containing the fluorine compound according to claim 2,

wherein the fluorine compound is a carboxylic acid or a sulfonic acid having a fluorocarbon chain, in which the number of carbon is more than 5.

Claim 17 (Previously Presented): The treatment process of the solution containing the fluorine compound according to claim 2,

wherein the layered double hydroxide having the fluorine compound between layers is shown in the following formula [1]:



where, Y is an anion having valence number m of the fluorine compound having the fluorocarbon chain, M(II) is a divalent metal ion, M(III) is a trivalent metal ion, X is 0.1 to 0.5, and n is 0 or positive integer.

Claim 18 (Previously Presented): A treatment process for recovering for an organic compound having a fluorocarbon chain, hereinafter the fluorine compound, and its salts, the process comprising,

precipitating the layered double hydroxide by the treatment process according to claim 2,

recovering the solid part by the solid-liquid separation,

dissolving said recovered solid part in a mineral acid to recover the separated fluorine compound or its salts, or

heating said mineral acid dissolving the recovered solid part,

putting quietly to separate an oil layer, and
taking out the oil layer to recover the fluorine compound and its salts.

Claim 19 (Previously Presented): A treatment process for recovering an organic compound having a fluorocarbon chain, hereinafter the fluorine compound, and its salts, the process comprising,

precipitating the layered double hydroxide by the treatment process according to claim 2,

recovering the solid part by solid-liquid separation,
dispersing the recovered solid part to an organic solvent, and
filtering an insoluble part from said solvent.

Claim 20 (New): The treatment process according to Claim 1, wherein at least 80% of the organic compound having a fluorocarbon chain is removed from the solution after forming the layered double hydroxide.

Claim 21 (New): The process according to Claim 1, wherein at least 90% of the organic compound having a fluorocarbon chain is removed from the solution after forming the layered double hydroxide.

Claim 22 (New): The treatment process of Claim 2, wherein at least 80% of the compound having a fluorocarbon chain is removed from the solution after separating the fluorine compound or its salt.

Claim 23 (New): The treatment process of Claim 2, wherein at least 90% of the compound having a fluorocarbon chain is removed after separating the fluorine compound or its salt.

Claim 24 (New): A process for removing an organic compound having a fluorocarbon chain from a solution, comprising:

adding one or more of a divalent or a trivalent metal salt to the solution to fix the organic compound by forming a layered double hydroxide, wherein the organic compound is present between the layers of the layered double hydroxide, to remove the organic compound from the solution.

Claim 25 (New): A process for removing an organic compound having a fluorocarbon chain from a solution, comprising:

adding one or more of a divalent or a trivalent metal salt to the solution,
precipitating a layered double hydroxide from the solution, wherein the organic compound is present between the layers of the layered double hydroxide,
separating the precipitated layered double hydroxide from the solution,
dissolving the separated, precipitated layered double hydroxide in an acid, and
separating the organic compound or a salt thereof from the dissolved, precipitated layered double hydroxide.

BASIS FOR THE AMENDMENT

Claims 1-10 and 12-25 are active in the present application. Claims 20-25 are new claims. Support for new Claims 20-25 is found in the last column of Table 1 on page 28 which provides the reduction in the amount of the organic compound having a fluorocarbon chain after the solution containing the organic compound is treated by the invention process, and page 6, lines 19-20. Support for new Claims 24 and 25 is found in the original claims and throughout the specification. No new matter is added.